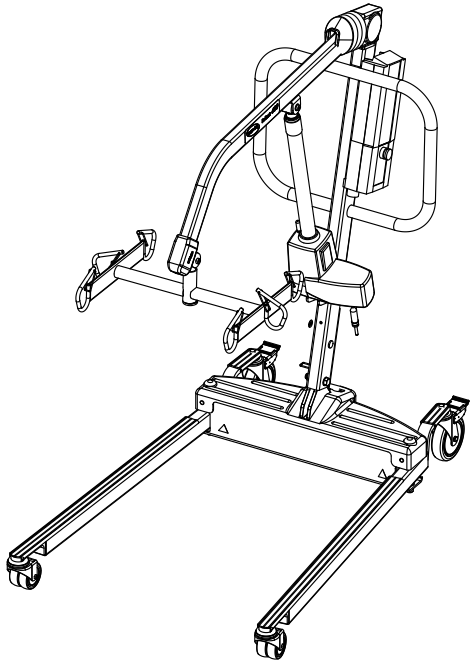

Invacare® **Reliant**™ **450** RPL450-2

Invacare® **Reliant 600** RPL600-2

Electric Mobile Patient Lift

User Manual

EN

This manual MUST be given to the user of the product.

BEFORE using this product, read this manual and save for future reference.

INVACARE®

Yes, you can.®

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User Manual

Electric Mobile Patient Lift

DEALER: This manual MUST be given to the user of the product.

USER: BEFORE using this product, read this manual and save for future reference.

1 GENERAL 5

Symbols 5
Warnings 5
Limited Warranty 6

2 SAFETY 7

General Guidelines 7
Operating Information 7
General 7
Pinch Points and Positioning 8
Assembling the Lift 8
Operating the Lift 8
Using the Sling 9
Lifting the Patient 9
Transferring the Patient 10
Performing Maintenance 10
Electrical and Grounding 11
Disposal 11
Radio Frequency Interference 11

3 PRODUCT LABELING 12

4 TECHNICAL DATA 13

Patient Lift 13
Full Body, Divided Leg and Toileting Slings 14
Reliant Scale RLS6 14

5 ASSEMBLY 15

Introduction 15
Unpacking the Patient Lift 15
Assembling the Mast to the Base 16
Assembling the Boom Actuator 17
Installing the Leg Actuator to the Base 18
Mounting the Battery Charger 19

6 OPERATION 20

Introduction 20
Using the Hand Control Buttons 20
Raising/Lowering the Boom 20
Opening/Closing the Legs 20
Activating a Mechanical Emergency Release 21
Performing an Emergency Stop 22
Charging the Battery 23

7 LIFTING THE PATIENT 24

Introduction 24
Positioning the Patient Lift 24
Attaching a Sling 25
Lifting/Moving the Patient 26

CONTENTS

8 TRANSFERRING THE PATIENT 28

Introduction 28
Transferring to a Commode Chair 29
Transferring to a Standard Commode 30
Transferring to a Bathing Unit 30
Transferring to a Wheelchair 31

9 TROUBLESHOOTING 32

10 MAINTENANCE 33

Maintenance Safety Inspection Checklist 33
Lubricating the Lift 35
Detecting Wear and Damage 36
Cleaning the Sling and the Lift 36
Replacing the Boom Actuator 36
Checking and Tightening Mast Pivot Bolt 37
Replacing the Hanger bar 38
Maintaining the Base Adjustment 39
Replacing Casters/Forks 40
Replacing Rear Casters 40
Replacing Front Casters 41
Replacing Forks 41

11 ACCESSORIES 42

Reliant Scale RLS6 42
Removing the Hanger bar 42
Installing the Reliant Scale 44
Operating the Scale 46
Keypad Functions 46
Weighing the Patient 47
Replacing the Battery 48
Calibrating the Reliant Scale 49
Troubleshooting 50
Display Codes 50

1 General

1.1 Symbols

Warnings

Signal words are used in this manual and apply to hazards or unsafe practices which could result in personal injury or property damage. See the information below for definitions of the signal words.

DANGER

Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Caution indicates a potentially hazardous situation which, if not avoided, may result in property damage or minor injury or both.

IMPORTANT

Indicates a hazardous situation that could result in damage to property if it is not avoided.

Gives useful tips, recommendations and information for efficient, trouble-free use.

1.2 Limited Warranty

PLEASE NOTE: THE WARRANTY BELOW HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4, 1975.

This warranty is extended only to the original purchaser/user of our products.
This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.
Invacare warrants the products manufactured to be free from defects in materials and workmanship for a period of three years on the lift and one year on the slings and electric components from the date of purchase. If within such warranty period any such product shall be proven to be defective, such product shall be repaired or replaced, at Invacare's option. This warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. Invacare's sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.
For warranty service, please contact the dealer from whom you purchased your Invacare product. In the event you do not receive satisfactory warranty service, please write directly to Invacare at the address on the back cover, provide dealer's name, address, date of purchase, indicate nature of the defect.
Invacare Corporation will issue a serialized return authorization. The defective unit or parts MUST be returned for warranty inspection using the serial number, when applicable as identification within 30 days of return authorization date. Do not return products to our factory without our prior consent. C.O.D. shipments will be refused; please prepay shipping charges.
LIMITATIONS AND EXCLUSIONS: THE FOREGOING WARRANTY SHALL NOT APPLY TO SERIAL NUMBERED PRODUCTS IF THE SERIAL NUMBER HAS BEEN REMOVED OR DEFACED, PRODUCTS SUBJECTED TO NEGLIGENCE, ACCIDENT, IMPROPER OPERATION, MAINTENANCE OR STORAGE, PRODUCTS MODIFIED WITHOUT INVACARE'S EXPRESS WRITTEN CONSENT (INCLUDING, BUT NOT LIMITED TO, MODIFICATION THROUGH THE USE OF UNAUTHORIZED PARTS OR ATTACHMENTS; PRODUCTS DAMAGED BY REASON OF REPAIRS MADE TO ANY COMPONENT WITHOUT THE SPECIFIC CONSENT OF INVACARE, OR TO A PRODUCT DAMAGED BY CIRCUMSTANCES BEYOND INVACARE'S CONTROL, AND SUCH EVALUATION WILL BE SOLELY DETERMINED BY INVACARE. THE WARRANTY SHALL NOT APPLY TO PROBLEMS ARISING FROM NORMAL WEAR OR FAILURE TO ADHERE TO THE INSTRUCTIONS IN THIS MANUAL.
THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, IF ANY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE DURATION OF THE EXPRESSED WARRANTY PROVIDED HEREIN AND THE REMEDY FOR VIOLATIONS OF ANY IMPLIED WARRANTY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT PURSUANT TO THE TERMS CONTAINED HEREIN. INVACARE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES WHATSOEVER.
SOME STATES DO NOT ALLOW EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGE, OR LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE EXCLUSIONS AND LIMITATIONS MAY NOT APPLY TO YOU.
THIS WARRANTY SHALL BE EXTENDED TO COMPLY WITH STATE OR PROVINCIAL LAWS AND REQUIREMENTS.

2 Safety

The Safety section contains important information for the safe operation and use of this product.

2.1 General Guidelines

WARNING

DO NOT use this product or any available optional equipment without first completely reading and understanding these instructions and any additional instructional material such as owner's manuals, service manuals or instruction sheets supplied with this product or optional equipment. If you are unable to understand the warnings, cautions or instructions, contact a healthcare professional, dealer or technical personnel before attempting to use this equipment - otherwise, injury or damage may occur.

ACCESSORIES WARNING

Invacare products are specifically designed and manufactured for use in conjunction with Invacare accessories. Accessories designed by other manufacturers have not been tested by Invacare and are not recommended for use with Invacare products.

NOTICE

THE INFORMATION CONTAINED IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.

Check all parts for shipping damage before using. In case of damage, DO NOT use the equipment. Contact the Dealer for further instructions.

2.2 Operating Information

General

WARNING

The Invacare patient lift is NOT a transport device. It is intended to transfer an individual from one resting surface to another (such as a bed to a wheelchair). Otherwise injury or damage may occur.

DO NOT attempt any transfer without approval of the patient's physician, nurse or medical assistant. Thoroughly read the instructions in this Owner's Manual, observe a trained team of experts perform the lifting procedures and then perform the entire lift procedure several times with proper supervision and a capable individual acting as a patient.

Use common sense in all lifts. Special care MUST BE taken with people with disabilities who cannot cooperate while being lifted.

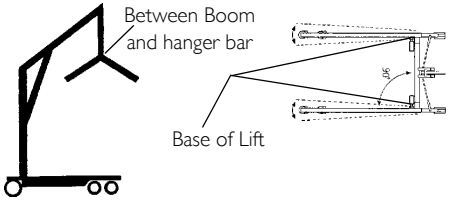
Invacare slings and patient lift accessories are specifically designed to be used in conjunction with Invacare patient lifts. Slings and accessories designed by other manufacturers are not to be utilized as a component of Invacare's patient lift system.

If the patient lift is exposed to extreme temperature (above 100°F or below 32°F), high humidity and/or becomes wet, prior to use, ensure handgrips do not twist on patient lift handle - otherwise damage or injury may occur.

Pinch Points and Positioning

WARNING

Pinch points exist between boom and hanger bar. Pinch points also exist at base of lift. When positioning lift, be aware of the position of the hanger bar and the patient. Injury could occur.



Assembling the Lift

WARNING

DO NOT overtighten mounting hardware. This will damage mounting brackets.

Operating the Lift

WARNING

Although Invacare recommends that two assistants be used for all lifting preparation, transferring from and transferring to procedures, our equipment will permit proper operation by one assistant. The use of one assistant is based on the evaluation of the health care professional for each individual case.

Make sure there is an audible click when mounting battery on the battery charger to confirm proper mounting. Otherwise, injury or damage may occur.

DO NOT exceed maximum weight limitation of the patient lift. The weight limitation for the RPL450-2 is 450 lbs. The weight limitation for the RPL600-2 is 600 lbs.

ALWAYS keep hands and fingers clear of moving parts to avoid injury.

Using the Sling

WARNING

Use an Invacare approved sling that is recommended by the individual's doctor, nurse or medical assistant for the comfort and safety of the individual being lifted.

DO NOT use any kind of plastic back incontinence pad or seating cushion between patient and sling material that may cause the patient to slide out of the sling during transfer.

After each laundering (in accordance with instructions on the sling), inspect sling(s) for wear, tears, and loose stitching.

Bleached, torn, cut, frayed, or broken slings are unsafe and could result in injury. Discard immediately.

DO NOT alter slings.

Be sure to check the sling attachments each time the sling is removed and replaced, to ensure that it is properly attached before the patient is removed from a stationary object (bed, chair or commode).

If the patient is in a wheelchair, secure the wheel locks in place to prevent the chair from moving forwards or backwards.

When connecting slings equipped with color coded straps to the patient lift, the shortest of the straps MUST be at the back of patient for support. Using long section will leave little or no support for patient's back. The loops of the sling are color coded and can be used to place patient in various positions. The colors make it easy to connect both sides of the sling equally. Make sure that there is sufficient head support when lifting a patient.

Lifting the Patient

WARNING

When using an adjustable base lift, the legs MUST be in the maximum Opened/Locked position before lifting the patient.

When elevated a few inches off the surface of the stationary object (wheelchair, commode, or bed) and before moving the patient, check again to make sure that the sling is properly connected to the hooks of the hanger bar. If any attachments are not properly in place, lower the patient back onto the stationary object (wheelchair, commode, or bed) and correct this problem.

Adjustments for safety and comfort should be made before moving the patient. Patient's arms should be inside of the straps.

Invacare slings are made specifically for use with Invacare Patient Lifts. For the safety of the patient, DO NOT intermix slings and patient lifts of different manufacturers. Warranty will be voided.

During transfer, with patient suspended in a sling attached to the lift, DO NOT roll caster base over uneven surfaces that could cause the patient lift to tip over. Use steering handle on the mast at all times to push or pull the patient lift.

Invacare does not recommend locking of the rear casters of the patient lift when lifting an individual. Doing so could cause the lift to tip and endanger the patient and assistants. Invacare does recommend that the rear casters be left unlocked during lifting procedures to allow the patient lift to stabilize itself when the patient is initially lifted from a chair, bed or any stationary object.

Transferring the Patient

WARNING

When elevated a few inches off the surface of the stationary object (wheelchair, commode, or bed) and before moving the patient, check again to make sure that the sling is properly connected to the hooks of the hanger bar. If any attachments are not properly in place, lower the patient back onto the stationary object (wheelchair, commode, or bed) and correct this problem.

Wheelchair wheel locks MUST be in a locked position before lowering the patient into the wheelchair for transport.

Before transferring, check that the wheelchair weight capacity can withstand the patient's weight.

Be sure to check the sling attachments each time the sling is removed and replaced, to ensure that it is properly attached before the patient is removed from the bed or chair.

Mast pivot under the rubber boot must be tight to ensure safe use of the patient lift. Bolt must be checked at least every six months in conjunction with periodic maintenance.

Performing Maintenance

WARNING

Maintenance MUST be performed ONLY by qualified personnel.

After the first year of use, the hooks of the hanger bar and the mounting brackets of the boom should be inspected every three months to determine the extent of wear. If these parts become worn, replacement must be made.

Casters and axle bolts require inspections every six months to check for tightness and wear.

After the first twelve months of operation, inspect the hanger bar and the eye of the boom (to which it attaches) for wear. If the metal is worn, the parts MUST be replaced. Make this inspection every six months thereafter.

Regular maintenance of patient lifts and accessories is necessary to assure proper operation.

DO NOT overtighten mounting hardware. This will damage mounting brackets.

After the first six months of operation, inspect all pivot points and fasteners for wear. If the metal is worn, the parts MUST be replaced. Make this inspection every six months.

Electrical and Grounding

WARNING

GROUNDING INSTRUCTIONS

DO NOT, under any circumstances, cut or remove the round grounding prong from any plug used with or for Invacare products. Some devices are equipped with three-prong (grounding) plugs for protection against possible shock hazards. Where a two-prong wall receptacle is encountered, it is the personal responsibility and obligation of the customer to contact a qualified electrician and have the two-prong receptacle replaced with a properly grounded three-prong wall receptacle in accordance with the National Electrical Code. If you must use an extension cord, use ONLY a three-wire extension cord having the same or higher electrical rating as the device being connected. In addition, Invacare has placed RED/ORANGE warning tags on some equipment. DO NOT remove these tags.

Carefully read battery/battery charger information prior to installing, servicing or operating your patient lift.

Disposal

WARNING

This product has been supplied from an environmentally aware manufacturer that complies with the Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/CE.

DO NOT dispose of batteries in normal household waste. Device contains lead acid batteries. They MUST be taken to a proper disposal site. Contact your local waste management company for information.

This product may contain substances that could be harmful to the environment if disposed of in places (landfills) that are not appropriate according to legislation.

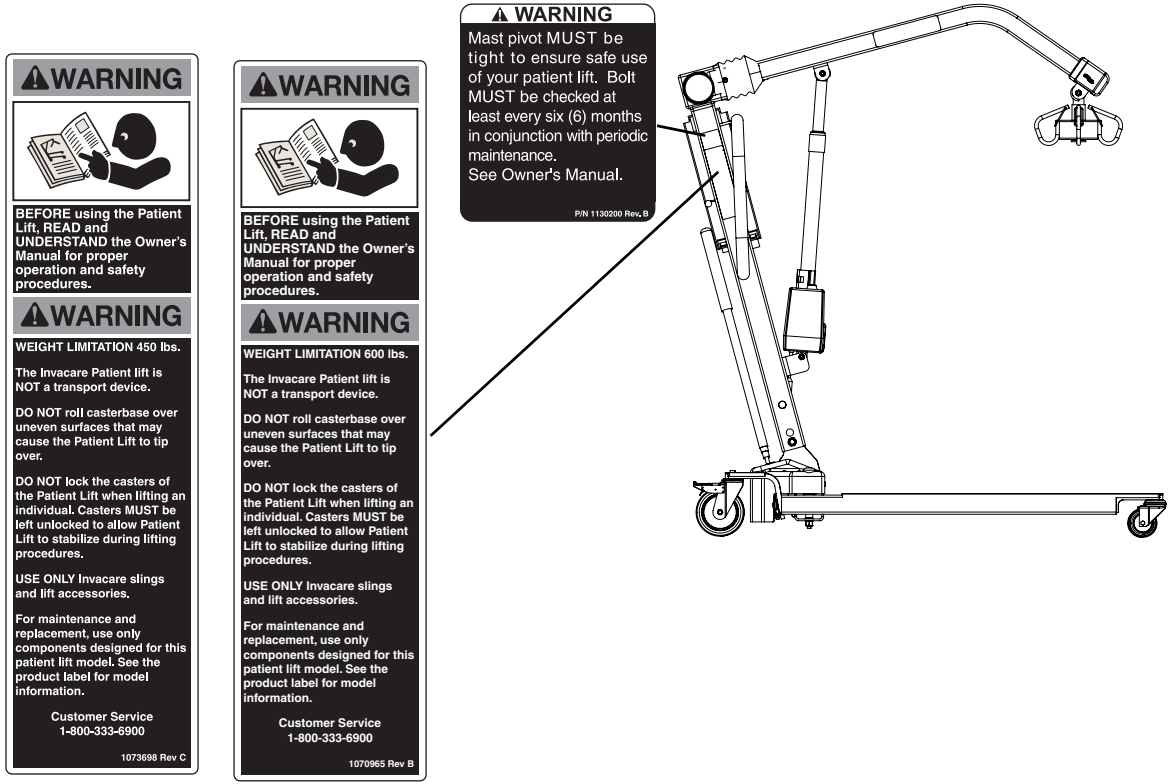
Please be environmentally responsible and recycle this product through your recycling facility at its end of life.

2.3 Radio Frequency Interference

WARNING

Most electronic equipment is influenced by Radio Frequency Interference (RFI). CAUTION should be exercised with regard to the use of portable communication equipment in the area around such equipment. If RFI causes erratic behavior, PUSH the Red Power Switch OFF IMMEDIATELY. DO NOT turn the Power Switch ON while transmission is in progress.

3 Product Labeling


⚠WARNING
BEFORE using the Patient Lift, READ and UNDERSTAND the Owner's Manual for proper operation and safety procedures.
⚠WARNING
WEIGHT LIMITATION 450 lbs.
The Invacare Patient lift is NOT a transport device.
DO NOT roll casterbase over uneven surfaces that may cause the Patient Lift to tip over.
DO NOT lock the casters of the Patient Lift when lifting an individual. Casters MUST be left unlocked to allow Patient Lift to stabilize during lifting procedures.
USE ONLY Invacare slings and lift accessories.
For maintenance and replacement, use only components designed for this patient lift model. See the product label for model information.
Customer Service
1-800-333-6900
1073698 Rev C
⚠WARNING
BEFORE using the Patient Lift, READ and UNDERSTAND the Owner's Manual for proper operation and safety procedures.
⚠WARNING
WEIGHT LIMITATION 600 lbs.
The Invacare Patient lift is NOT a transport device.
DO NOT roll casterbase over uneven surfaces that may cause the Patient Lift to tip over.
DO NOT lock the casters of the Patient Lift when lifting an individual. Casters MUST be left unlocked to allow Patient Lift to stabilize during lifting procedures.
USE ONLY Invacare slings and lift accessories.
For maintenance and replacement, use only components designed for this patient lift model. See the product label for model information.
Customer Service
1-800-333-6900
1070965 Rev B
⚠ WARNING
Mast pivot MUST be tight to ensure safe use of your patient lift. Bolt MUST be checked at least every six (6) months in conjunction with periodic maintenance.
See Owner's Manual.
P/N 1130200 Rev. B

4 Technical Data

4.1 Patient Lift

	450 LB. ELECTRIC	600 LB. ELECTRIC
	LOW PROFILE RPL450-2	LOW PROFILE RPL600-2
Height at Sling Hook-up - MAX.:	74 inches	68 inches
Height at Sling Hook-up - MIN.:	24 inches	28 inches
Base Width OPEN:	41.0 inches	
Base Width CLOSED:	26.5 inches	
Base Height (Clearance):	4.5 inches	
Base Length:	48.0 inches	
Caster Size (FRONT/REAR):	3.0/5.0 inches	
Sling Options:	3 Styles	1 Style
Weight Capacity:	450 lbs	600 lbs
Weight IN Carton:	136 lbs	141 lbs
Weight OUT of Carton:	109 lbs	115 lbs
Battery:	24V DC (RCHBL)	
Charger Input:	100-240V AC	
Charger Output/Charging Time:	29.5V DC Max 6 hrs	
Accessories:	Digital Scale	
Audio Low Battery Alarm:	Yes	
Motor Safety Devices:	Anti-Entrapment	
Approx. Lifts per Charge (Varies depending upon load and stroke):	100-200 Cycles per charge	
Warranty Electronics:	1 Year	

4.2 Full Body, Divided Leg and Toileting Slings

	FULL BODY			FULL BODY W/COMMODE			DIVIDED LEG				TOILETING	HEAVY DUTY W/O COMMODE	HEAVY DUTY W/ COMMODE
	R110 R112*	R111 R113*	R114	R115	R116	R117*	R100P	R100	R101	R102	R121	R140*	R141*
Size:	M	L	XL	M	L	XL	P	M	L	XL	L	N/A	N/A
Width:	41.5	45.5	45.5	41.5	45.4	45.5	33	37.5	41	44.5	36	45	45
Commode Opening:	N/A	N/A	N/A	8	8	9	N/A	N/A	N/A	N/A	N/A	N/A	7
Length:	54.7	60.5	65.3	54.7	60.5	65.3	59.8	62.8	67.8	72.3	37	55	55
Commode Opening:	N/A	N/A	N/A	11	11	13	N/A	N/A	N/A	N/A	N/A	N/A	13
Back:	N/A	N/A	N/A	N/A	N/A	N/A	29.2	35.7	41.7	43.2	N/A	N/A	N/A
Weight Capacity (lbs):	450	450	450	450	450	450	450	450	450	450	450	600	600
ⓘ	*Slings made of a mesh material. All dimensions are in inches except where noted.												

4.3 Reliant Scale RLS6

Weight Range:	Up to 600 Lbs. (272.7 Kg)
Resolution:	+/- 0.2 Lbs (.1 Kg)
Display:	Liquid Crystal Digital
Automatic Power Down:	Two (2) minutes
Size:	5-3/4 L X 3-5/8 W X 4 H
Weight:	.55 Lbs
Power:	Nine (9) Volt Alkaline battery (included)
Battery Life:	Approximately 1500 readings
Temperature Range:	50° To 104°F (10° To 40°C)

5 Assembly

5.1 Introduction

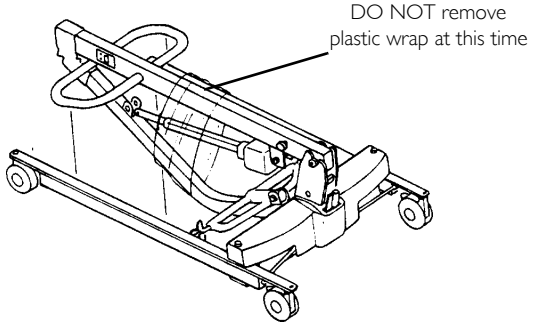
WARNING

Use only Invacare parts in the assembly of this patient lift. The base legs, mast, boom assembly and the hanger bar are manufactured to specifications that assure correct alignment of all parts for safe functional operation.

5.2 Unpacking the Patient Lift

1. Unpack the components from the shipping carton.

DO NOT remove the plastic wrap that secures the boom to the mast. The plastic wrap will be removed in Assembling the Boom Actuator on page 17.

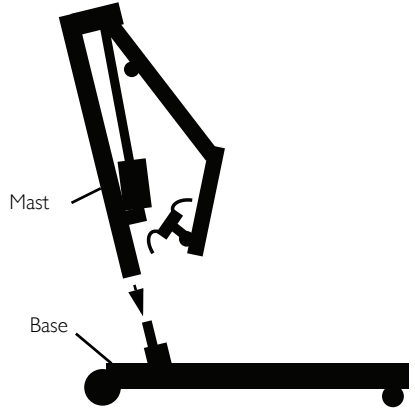


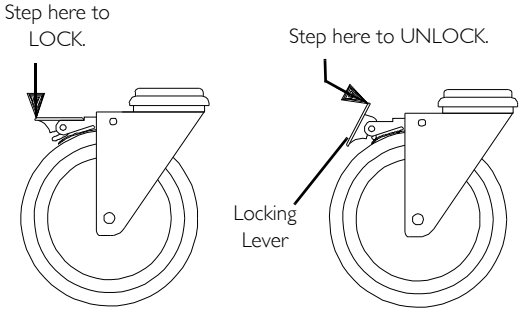
5.3 Assembling the Mast to the Base

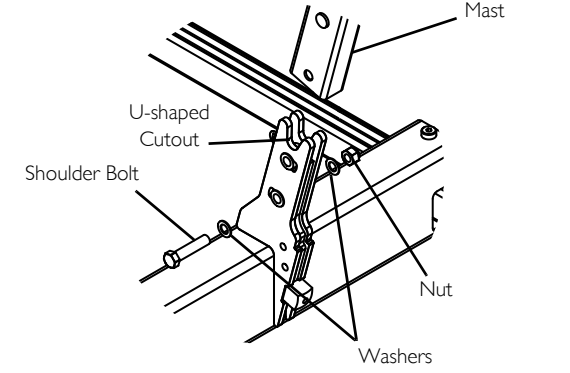
WARNING

The mast may be removed from the base for storage or transporting. Each time the mast is removed and returned to the base, the mast MUST be properly secured to the base assembly.

1. If locking-type casters are on the patient lift, lock them.
2. Remove the shoulder bolt, nut and washer, that secures the mast in the U-shape cut-out of the base.
3. Position the mast in an upright position and place the mast into the U-shaped cut-out of the base.
4. Insert shoulder bolt with washers through the base and mast.
5. Secure with nut.







5.4 Assembling the Boom Actuator

CAUTION

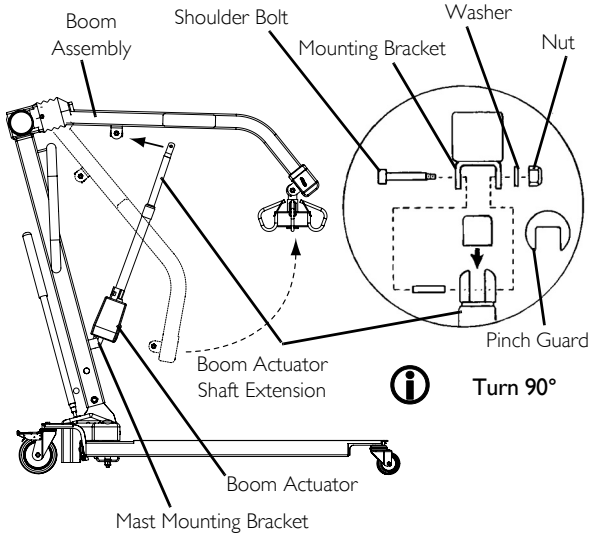
DO NOT overtighten the nut and bolt. This damages the mounting bracket.

1. Remove the shoulder bolt, washer and nut from the mounting bracket on the boom assembly.
2. Unpack the pinch guard from the patient lift carton.

The bottom of the boom actuator assembly will already be assembled to the mast mounting bracket.

3. Cut the plastic-wrap that secures the boom and mast together.
4. Lift-up on the boom and place it on your left shoulder.
5. Let the boom actuator rest on your shoulder and rotate the shaft extension of the actuator assembly until it lines-up with the mounting holes in the boom assembly.
6. Place the pinch guard over the shaft extension of the boom actuator.
7. Align the holes of the boom assembly mounting bracket with those of the boom actuator and insert the bolt. Secure with nut.

Be sure that the bolt is completely through the holes of the boom assembly mounting bracket and the actuator assembly. The boom assembly will pivot easily if the mounting hardware is aligned properly when the boom assembly is secured to the mast.



5.5 Installing the Leg Actuator to the Base

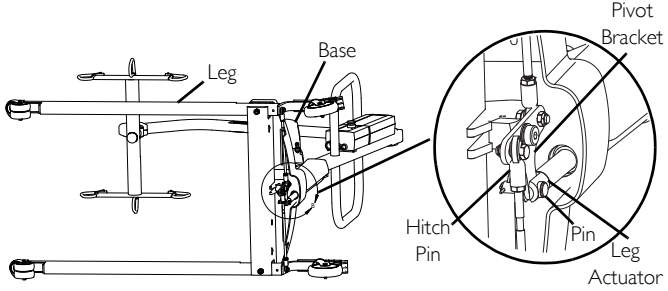
1. Slide the leg actuator into the slot in the base of the patient lift (Detail B).
2. Perform the following to secure the leg actuator to the pivot bracket (Detail A):

WARNING

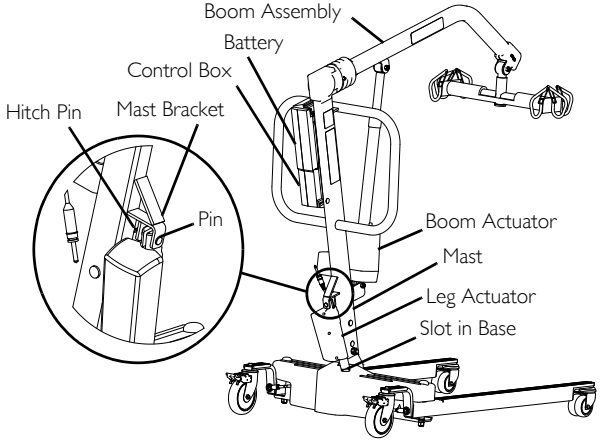
Ensure that there is sufficient room to turn patient lift on its side and that floor area is clear of debris. Otherwise, injury to personnel or damage to patient lift may occur.

   A. Turn the patient lift on its side.
   B. Position slot in leg actuator over the pivot bracket.
   C. Install the pin through the leg actuator and pivot bracket and secure with hitch pin.
   D. Return the patient lift to the upright position.
3. Perform the following to secure the leg actuator to the mast bracket:
   A. Position leg actuator between mast brackets.
   B. Move the legs to align the holes in the leg actuator with the holes in the mast bracket.
   C. Install the pin through the holes of the leg actuator and mast bracket and secure with hitch pin.
4. Plug the hand control control (not shown) into the bottom of the control box.

DETAIL "A" - SIDE VIEW OF PATIENT LIFT



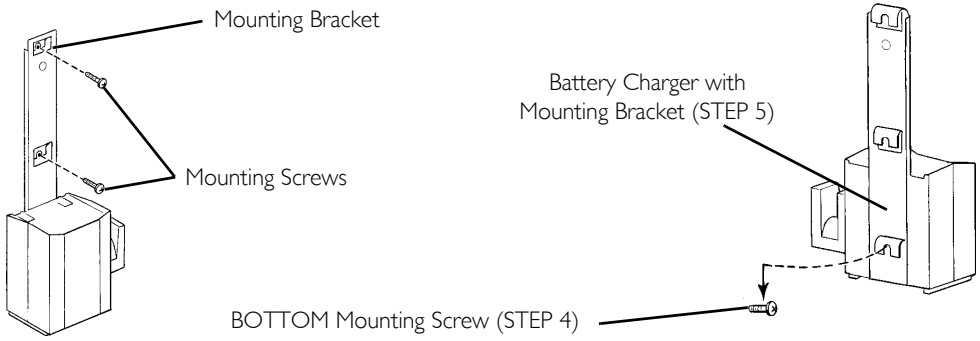
DETAIL "B"



5.6 Mounting the Battery Charger

Refer to your local regulations concerning proper mounting procedures.

1. Place the battery charger with mounting bracket on the wall at the desired position.
2. With a pencil, mark the middle hole position.
3. Measure down 6½ inches from the pencil mark and drill one mounting hole.
4. Install the bottom mounting screw until there is an approximate 1/8-inch gap between the screw head and the wall.
5. Install the battery charger with mounting bracket onto the bottom mounting screw.
6. Drill the remaining two mounting holes.
7. Install the two remaining mounting screws through the mounting bracket and into the wall. Tighten securely.
8. Plug the battery charger into the wall electrical outlet.
9. Verify that ON is illuminated.



6 Operation

6.1 Introduction

WARNING

DO NOT attempt any transfer without approval of the patient's physician, nurse or medical assistant. Thoroughly read the instructions in this Owner's Manual, observe a trained team of experts performing the lifting procedures and then perform the entire lift procedure several times with proper supervision and a capable individual acting as a patient.

The legs of the lift must be in the maximum open position for optimum stability and safety. If it is necessary to close the legs of the lift to maneuver the lift under a bed, close the legs of the lift only as long as it takes to position the lift over the patient and lift the patient off the surface of the bed. When the legs of the lift are no longer under the bed, return the legs of the lift to the maximum open position.

Invacare recommends that two assistants be used for all lifting preparation and transferring to/from procedures; however, the patient lift can be operated with one assistant. The use of one assistant is based on the evaluation of the health care professional for each individual case.

6.2 Using the Hand Control Buttons

WARNING

DO NOT lock the rear casters of the patient lift when lifting an individual. Locking the rear casters could cause the patient lift to tip and endanger the patient and assistants.

The hand control is used to raise/lower the boom or to open/close the legs of the base for stability when lifting a patient

Raising/Lowering the Boom

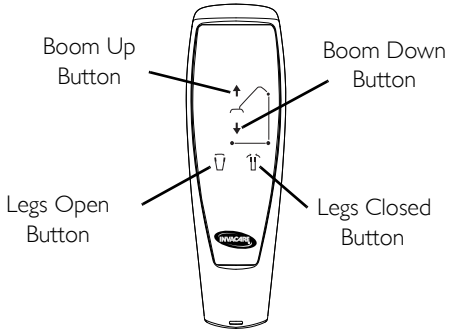
To raise the patient lift, press the boom up button (up arrow) to raise the boom and the patient.

To lower the patient lift, press the boom down button (down arrow) to lower the boom and the patient.

Opening/Closing the Legs

To open the legs, press the legs open button.

To close the legs, press the legs closed button.

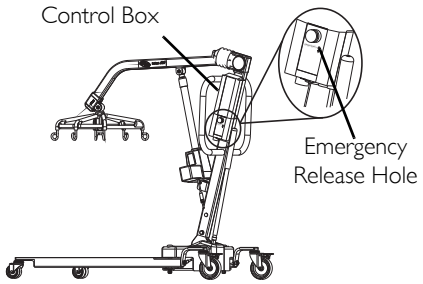


6.3 Activating a Mechanical Emergency Release

Primary Emergency Release

To activate the primary emergency release, insert a pen into the hole labeled “emergency” on the control box of the lift and push down on the boom at the same time.

All lift actuators are equipped with a mechanical Emergency release. The mechanical release will enable the actuator to retract without power. The actuator will only retract while under load and the mechanical Emergency release is pulled. The release is colored reddish orange with the word Emergency spelled out in white.

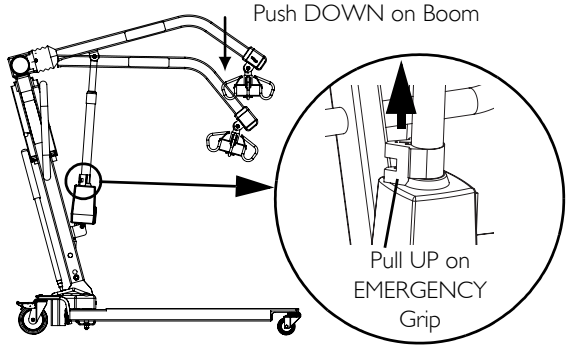


Secondary Emergency Release

Use the primary emergency release first. The secondary emergency release is only a back-up to the primary emergency release.

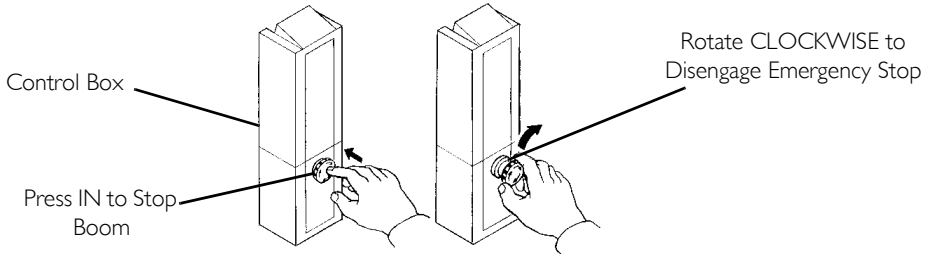
In cases where the primary release is either not functioning or unreachable, a secondary emergency release may be used.

To activate the secondary release, pull up on the EMERGENCY grip and push down on the boom at the same time.



6.4 Performing an Emergency Stop

Press the RED/ORANGE emergency button on the control box in to stop the boom assembly and patient from raising or lowering.
Rotate the RED/ORANGE emergency stop button clockwise to disengage the emergency stop.



6.5 Charging the Battery

Invacare recommends the battery be recharged daily to prolong battery life.
An audible alarm will sound (horn will beep) when battery is low.

1. Lift up on the handle on the back of the battery.
2. Lift the battery up and out away from the control box.

CAUTION

Make sure there is an audible click when mounting battery on the battery charger to confirm proper mounting. Otherwise, injury or damage may occur.

3. Place the battery on the battery charger as shown. Make sure there is an audible click.

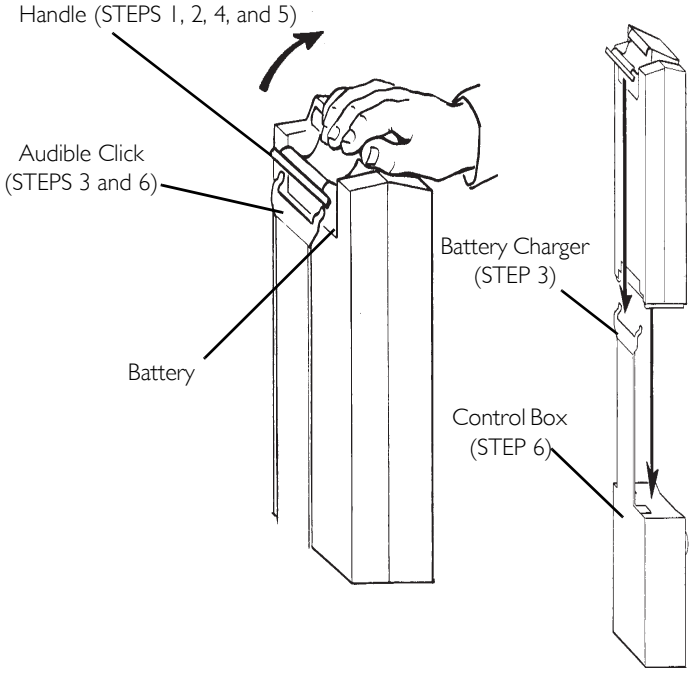
The charge LED will illuminate. When charging is complete, charge LED will stop illuminating.
A battery needing to be fully recharged will take approximately four hours.

4. Lift up on the handle on the back of the battery.
5. Lift the battery up and out away from the battery charger.

CAUTION

Make sure there is an audible click when mounting battery on the battery charger to confirm proper mounting. Otherwise, injury or damage may occur.

6. Reinstall the battery onto the control box as shown. Make sure there is an audible click.



The Battery mounts to the Control Box and Battery Charger as shown.

7 Lifting the Patient

7.1 Introduction

Invacare recommends that two assistants be used for all lifting preparation and transferring to/from procedures; however, our equipment will permit proper operation by one assistant. The use of one assistant is based on the evaluation of the health care professional for each individual case.

7.2 Positioning the Patient Lift

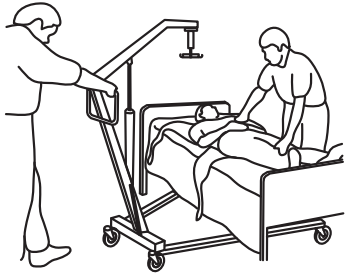
Refer to Safety on page 7 in this manual before proceeding further and observe all warnings indicated.

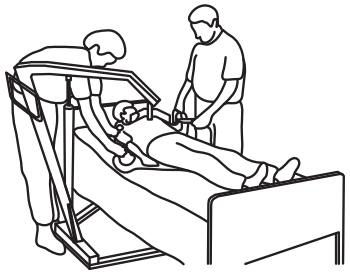
Before positioning the legs of the patient lift under a bed, make sure that the area is clear of any obstructions.

WARNING

The legs of the lift must be in the maximum open position for optimum stability and safety. If it is necessary to close the legs of the lift to maneuver the lift under a bed, close the legs of the lift only as long as it takes to position the lift over the patient and lift the patient off the surface of the bed. When the legs of the lift are no longer under the bed, return the legs of the lift to the maximum open position and lock the shifter handle immediately.

1. Press the legs open button on the hand control to open the legs of the patient lift to maximum.
2. Position the patient lift using the steering handle.
3. Press the boom down button on the hand control to lower the boom for easy attachment of the sling.





7.3 Attaching a Sling

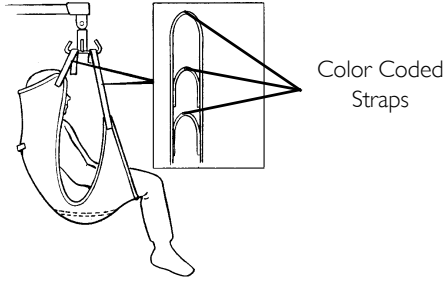
1. Place the straps of the sling over hooks of the hanger bar.
2. Match the corresponding colors on each side of the sling for an even lift of the patient.

Model Nos. R110 - R117 Full Body Slings and Model No. R121 Toileting Sling have four sling straps. Model Nos. R100 - R102 Divided Leg Slings have six sling straps.

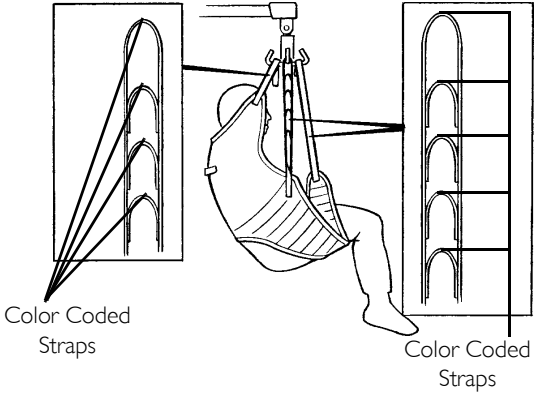
Invacare Lift Hanger Barss have three hookup points per side. The middle hookup is ONLY used for slings that have three sets of straps per side.

3. Use the lift. Refer to Lifting/Moving the Patient on page 26.

DETAIL "A" - FULL BODY OR HEAVY DUTY SLING WITH OR WITHOUT COMMODE OPENING (FOUR STRAPS ONLY)



DETAIL "B" - DIVIDED LEG SLING WITH COMMODE OPENING (SIX STRAPS)



7.4 Lifting/Moving the Patient

WARNING

DO NOT lock the rear casters of the patient lift when lifting an individual. Locking the rear casters could cause the patient lift to tip and endanger the patient and assistants.

DO NOT move the patient if the sling is not properly connected to the hooks of the hanger bar. When the sling is elevated a few inches off of the stationary surface and before moving the patient, check again to make sure that the sling is properly connected to the hooks of the hanger bar. If any attachments are NOT properly in place, lower the patient back onto the stationary surface and correct this problem - otherwise, injury or damage may occur.

Adjustments for safety and comfort should be made before moving the patient.

DO NOT use slings and patient lifts of different manufacturers. Invacare slings are made specifically for use with Invacare patient lifts. Injury or damage may occur.

For this procedure, refer to FIGURE 7.1 on page 27.

When the patient is lifted from the bed (with the patient's head supported by the sling and/or an assistant), he/she will be raised to a sitting position (Detail "A" of FIGURE 7.1 on page 27).

1. Press the boom UP (🡅) button to raise the patient high enough to clear the bed. The patient's weight will be fully supported by the patient lift.

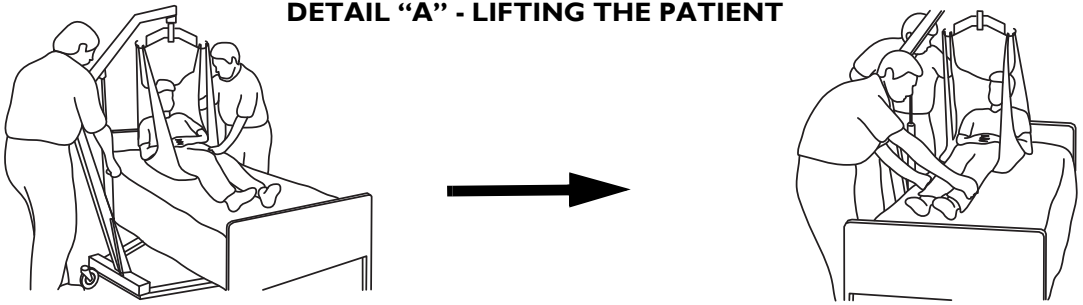
   The boom will stay in position until the boom DOWN (🡇) button is pressed.

2. Place patient's arms inside of sling.
3. Swing the patient's feet off the bed when the patient is clear of the bed surface (Detail "B" of FIGURE 7.1 on page 27).
4. Move the patient lift away from the bed using the steering handle.
5. Turn the patient so that he/she faces assistant operating the patient lift when moving the patient lift away from the bed (Detail "C" of FIGURE 7.1 on page 27).
6. Press the boom DOWN (🡇) button to lower the patient until his legs straddle the mast and his feet rest on the base of hte patient lift.

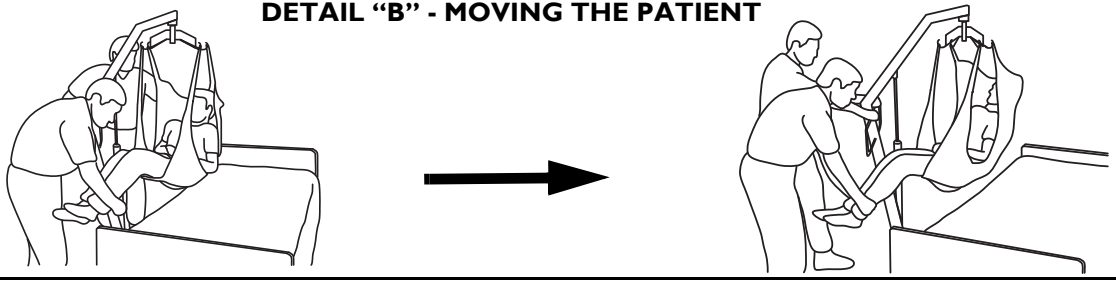
   The lower center of gravity provides stability making the patient feel more secure and the lift easier to move.

7. Pull the patient lift away from the bed and then push it from behind with both hands firmly on the steering handle.

DETAIL "A" - LIFTING THE PATIENT



DETAIL "B" - MOVING THE PATIENT



DETAIL "C" - MOVING THE PATIENT LIFT AWAY FROM THE BED

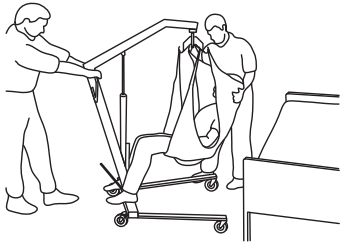


FIGURE 7.1 Lifting/Moving the Patient

8 Transferring the Patient

8.1 Introduction

WARNING

DO NOT attempt any transfer of a patient without approval of the patient's physician, nurse, or medical assistant.

DO NOT move the patient if the sling is not properly connected to the hooks of the hanger bar. When the sling is a few inches off the stationary surface and before moving the patient, check to make sure that the sling is properly connected to the hooks of the hanger bar. If any attachments are NOT properly in place, lower the patient back onto the stationary surface and correct this problem - otherwise, injury or damage may occur.

Adjustments for safety and comfort should be made before moving the patient. The patient's arms should be inside the straps.

DO NOT use slings and patient lifts of different manufacturers. Invacare slings are made specifically for use with Invacare patient lifts. Otherwise, injury or damage may occur.

DO NOT lock the rear casters of the patient lift when lifting an individual. Locking the rear casters could cause the patient lift to tip and endanger the patient and assistants.

The legs of the patient lift must be in the maximum open position for optimum stability and safety. If it is necessary to close the legs to maneuver the patient lift under a bed, close the legs only as long as it takes to position the patient lift over the patient and lift the patient off the surface of the bed. When the legs of the patient lift are no longer under the bed, return the legs to the maximum open position.

Be sure to check the sling attachments each time the sling is removed and replaced to ensure that it is properly attached before the patient is removed from a bed or chair.

The slings with commode openings are designed to be used with either a commode chair or standard commode.

Invacare recommends that the sling remain connected to the hanger bar hooks during the patient’s use of either the commode chair or standard commode.

Invacare recommends that two assistants be used for all lifting preparation and transferring to/from procedures; however, our equipment will permit proper operation by one assistant. The use of one assistant is based on the evaluation of the health care professional for each individual case.

8.2 Transferring to a Commode Chair

1. Lift the patient from the bed. Refer to Lifting the Patient on page 24.
2. Press the boom up button to elevate the patient high enough to clear the arms of the commode chair. Their weight will be supported by the patient lift.
3. Guide the patient onto the commode chair. This may require two assistants.
4. Press the boom down button to lower the patient onto the commode chair leaving the sling attached to the hanger bar hooks.
5. When complete, recheck the sling for correct attachments.
6. Press the boom up button to raise the patient off the commode chair.
7. When the patient is clear of the commode surface (using the steering handles), move the patient lift away from the commode chair.
8. To return the patient to bed, reverse the steps in Lifting the Patient on page 24.
9. To return or place the patient in a wheelchair, refer to Transferring to a Wheelchair on page 31

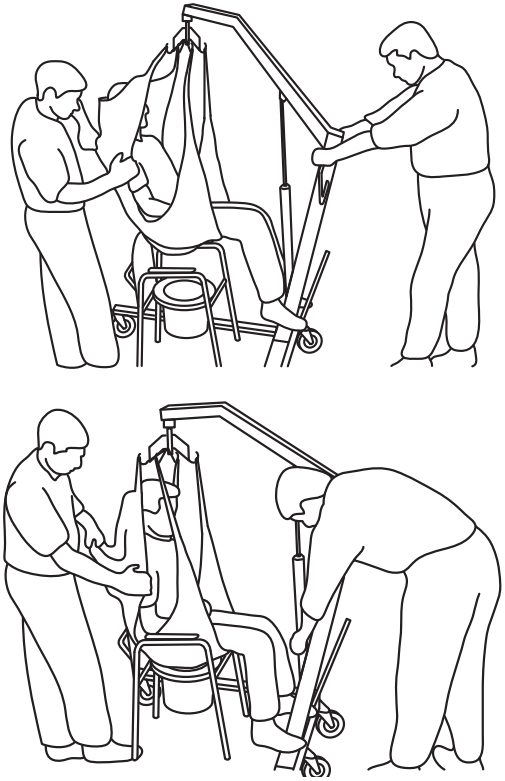


FIGURE 8.1 Transferring to a Commode Chair

8.3 Transferring to a Standard Commode

The Invacare patient lift is NOT intended as a transport device. If the bathroom facilities are NOT near the bed or if the patient lift cannot be easily maneuvered towards the commode, then the patient MUST be transferred to a wheelchair and transported to the bathroom facilities before using the patient lift again to position the patient on a standard commode. Refer to Transferring to a Wheelchair on page 31.

1. Use an empty patient lift to check if the patient lift can maneuver around the commode.
2. If the patient lift can maneuver around the commode, lift the patient from the bed. Refer to Lifting the Patient on page 24.
3. Transport the patient to the bathroom facility.
4. Press the boom up/down buttons to elevate the patient high enough to clear the commode. Their weight will be supported by the patient lift.
5. Guide the patient onto the commode. This may require two assistants.
6. Press the boom down button to lower the patient onto the standard commode leaving the sling attached to the hanger bar hooks.
7. When complete, recheck the sling for correct attachments.
8. Press the boom up button to raise the patient off the commode.
9. When patient is clear of the commode surface (using the steering handle), move the lift away from the commode.
10. To return the patient to bed, reverse the steps in Lifting the Patient on page 24.
11. To return or place patient in a wheelchair, refer to Transferring to a Wheelchair on page 31.

8.4 Transferring to a Bathing Unit

There are many portable bathing apparatuses; this is an example of one. Refer to your particular portable bath instructions and use them in conjunction with this Owner's Manual.

1. Lift the patient from the bed. Refer to Lifting the Patient on page 24.
2. Press the boom up/down buttons to elevate the patient high enough to clear the bed and portable bath tub.
3. Slide the portable bath tub under the patient.
4. Press the boom down button to lower the patient into the portable bath tub.
5. Detach the sling from the hanger bar hooks.
6. Attach the portable bath tub straps to the patient lift.
7. Press the boom up button to raise the sides of the portable bath tub.
8. Bathe the patient.
9. Reverse this procedure to return the patient to bed.

8.5 Transferring to a Wheelchair

1. Lift the patient from the bed. Refer to Lifting the Patient on page 26.
2. Ensure the legs of the lift with patient in the sling are in the open position. Press the legs open button until in maximum open position.
3. Move the wheelchair into position.
4. Engage the rear wheel locks of the wheelchair to prevent movement of the chair.

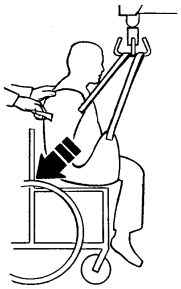
WARNING

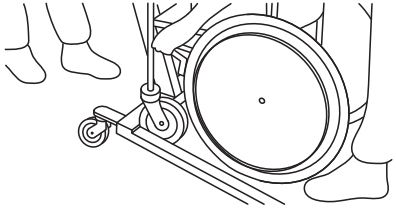
DO NOT place the patient in the wheelchair if the locks are not engaged. The wheelchair wheel locks MUST be in a locked position before lowering the patient into the wheelchair for transport. Otherwise, injury may result.

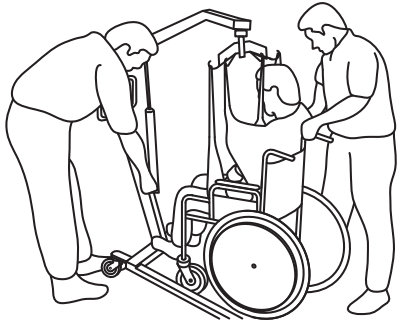
5. Use the straps or handles on the side and the back of the sling to guide the patient's hips as far back as possible into the seat for proper positioning.
6. Position the patient over the seat with their back against the back of the chair.
7. Begin to lower the patient either by opening the control valve or by pressing the boom down button.
8. Two assistants are recommended for this step - One assistant stands behind the chair and the other operates the patient lift. The assistant behind the chair pulls back on the grab handle (on select models) or sides of the sling to seat the patient well into the back of the chair.

   This will maintain a good center of balance and prevent the chair from tipping forward.

9. Leave the sling in place unless a divided leg sling was used. Remove a divided leg sling.
10. Reverse Lifting the Patient on page 26 to return to the seating surface of the wheelchair.







9 Troubleshooting

SYMPTOMS	FAULTS	SOLUTION
Patient lift feels loose.	Mast/Base joint loose. Tie - Rods are loose.	Refer to Assembly on page 15. Refer to Maintaining the Base Adjustment on page 39.
Casters/Brakes noisy or stiff.	Fluff or debris in bearings.	Refer to Replacing Casters/Forks on page 40.
Noisy or dry sound from pivots.	Needs lubrication.	Refer to Lubricating the Lift on page 35.
Actuator fails to lift or legs fail to open when button is pressed.	Hand-control or actuator connector loose. Battery low. RED emergency stop button pressed IN. Battery not connected properly to control box. The connecting terminals are damaged. Boom or leg actuator in need of service or load is too high.	Charge batteries. Refer to Charging the Battery on page 23. Rotate RED emergency stop button CLOCKWISE until it pops out. Reconnect the battery to the control box. Refer to Charging the Battery on page 23. Replace the battery pack. Refer to Charging the Battery on page 23. Refer to Replacing the Boom Actuator on page 36 or Installing the Leg Actuator to the Base on page 18. Contact your Dealer.
Unusual noise from actuator.	Actuator is worn or damaged or spindle is bent.	Refer to Replacing the Boom Actuator on page 36 or Installing the Leg Actuator to the Base on page 18. Contact your Dealer.
Lift arms will not lower in uppermost position.	Lift arms require a minimum weight load to lower from the uppermost position.	Pull down slightly on the lift arms.
Lift arms will not lower during a power retraction.	Shoulder bolt at the junction of the boom and mast may not be properly installed.	Refer to Checking and Tightening Mast Pivot Bolt on page 37.

If problems are not remedied by the suggested means, please contact your dealer or Invacare.

10 Maintenance

10.1 Maintenance Safety Inspection Checklist

For individual home use, a full inspection is required prior to each new user.

Regular cleaning will reveal loose or worn parts, enhance smooth operation and extend the life expectancy of the lift.

Follow the maintenance procedures described in this manual to keep your patient lift in continuous service.

ITEM	INITIALLY	INSTITUTIONAL INSPECT/ADJUST MONTHLY	IN-HOME INSPECT EVERY SIX (6) MONTHS
THE CASTER BASE			
Inspect for missing hardware.	X	X	X
Base opens/closes with ease.	X	X	X
Inspect casters and axle bolts for tightness.	X	X	X
Inspect casters for smooth swivel and roll.	X	X	X
Inspect and clear wheels of debris.	X	X	X
Inspect pivot joints for wear.	X	X	X
THE MAST			
Mast MUST be securely assembled to boom.	X	X	X
Inspect for bends or deflections.	X	X	X
Inspect pivot joints for wear.	X	X	X

ITEM	INITIALLY	INSTITUTIONAL INSPECT/ADJUST MONTHLY	IN-HOME INSPECT EVERY SIX (6) MONTHS
THE BOOM			
Check all hardware and hanger bar supports.	X	X	X
Inspect for bends or deflections.	X	X	X
Inspect bolted joints of boom for wear.	X	X	X
Inspect to ensure that the boom is centered between the base legs.	X	X	X
Check the mast pivot bolt under the rubber boot. Ensure that the bolt is tightly secured.	X	X	X
Inspect pivot joints for wear.	X	X	X
THE HANGAR BAR			
Check the bolt / hooks for wear or damage.	X	X	X
Check sling hooks for wear or deflection.	X	X	X
Inspect pivot joints for wear.	X	X	X
ACTUATOR ASSEMBLY			
Inspect hardware on mast, boom and base.	X	X	X
Check for wear or deterioration. (IF DAMAGED, RETURN TO FACTORY).	X	X	X
Cycle to ensure smooth quiet operation.	X	X	X
CLEANING			
Whenever necessary.	X	X	X
SLINGS AND HARDWARE			
CHECK ALL SLING ATTACHMENTS each time it is used to ensure proper connection and patient safety.	X	X	X
Inspect sling material for wear.	X	X	X
Inspect straps for wear.	X	X	X

The Invacare Patient Lift is designed to provide a maximum of safe, efficient and satisfactory service with minimum care and maintenance.

All parts of the Patient Lift are made of the best grades of steel, but metal to metal contact will wear after considerable use.

There is no adjustment or maintenance of either the casters or brakes, other than cleaning, lubrication and checking axle and swivel bolts for tightness. Remove all debris, etc. from the wheel and swivel bearings. If any parts are worn, replace these parts immediately.

If you question the safety of any part of the lift, contact your Dealer immediately and advise them of the problem.

10.2 Lubricating the Lift

The Invacare lift is designed for minimum maintenance. However, a six month check and lubrication should ensure continued safety and reliability.

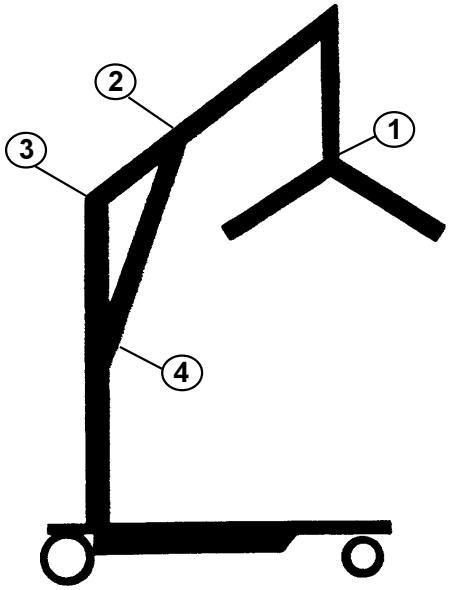
Keep lift and slings clean and in good working order. Any defect should be noted and reported to your dealer as soon as possible.

The casters MUST swivel and roll smoothly. A light grease (waterproof auto lubricant) may be applied to the ball bearing swivel of the casters once a year. Apply more frequently if the casters are exposed to extreme moist conditions.

Lubricate all pivot points. Wipe all excess lubricant from lift surface.

Lubricate the following points:

1. Hangar Bar
2. Boom Mounting Bracket
3. Boom/Mast Mount
4. Mast Mounting Bracket



10.3 Detecting Wear and Damage

It is important to inspect all stressed parts, such as slings, hanger bar and any pivot for slings for signs of cracking, fraying, deformation or deterioration. Replace any defective parts immediately and ensure that the lift is not used until repairs are made.

10.4 Cleaning the Sling and the Lift

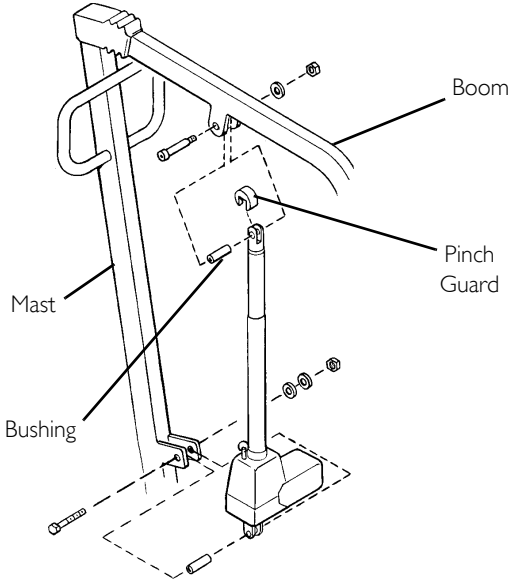
The sling should be regularly washed in water, temperature not to exceed 180°F (82°C) and a biocidal (anti-biological) solution. A soft cloth, dampened with water and a small amount of mild detergent, is all that is needed to clean the patient lift. The lift can be cleaned with non-abrasive cleaners.

10.5 Replacing the Boom Actuator

CAUTION

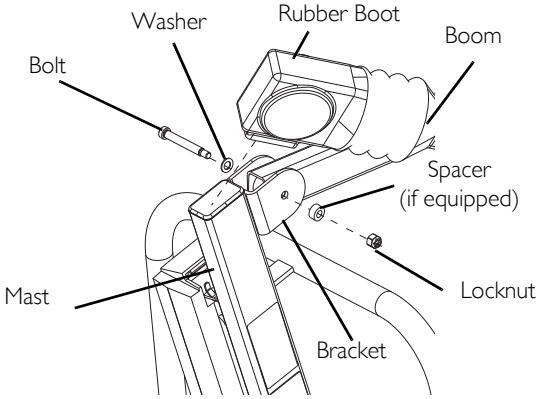
DO NOT overtighten the nut and bolt. This damages the mounting bracket.

1. Remove the nut, washer and shoulder bolt that secure the electric actuator to the mast mounting bracket.
2. Rest the boom on your shoulder and remove the nut, bolt, plastic bushing and pinch guard from the boom mounting bracket.
3. Remove the boom actuator assembly.
4. Reverse steps for installation.



10.6 Checking and Tightening Mast Pivot Bolt

1. Lift up the back of the rubber boot and slide it off the mast along the boom.
2. Check that the bolt is through the bracket and the locknut is tight and secure.
3. If needed, do one or more of the following:
   - Tighten locknut and back-off the locknut 1/8 of a turn.
   - Replace the locknut.
4. Reposition the rubber boot.



10.7 Replacing the Hangar Bar

WARNING

After the first year of use, the hooks of the hangar bar and mounting brackets of the boom should be inspected every six months to determine the extent of wear. If these parts become worn, replacement must be made.

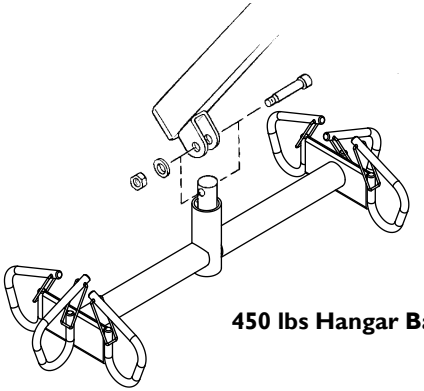
1. The hangar bar comes attached to the boom with bolt, nut, washers, and pinch guard.

   Washers should be placed against both sides of the boom mounting bracket to eliminate damage.
   The hangar bar has three hooks on both ends to attach the sling that supports the patient during lift.

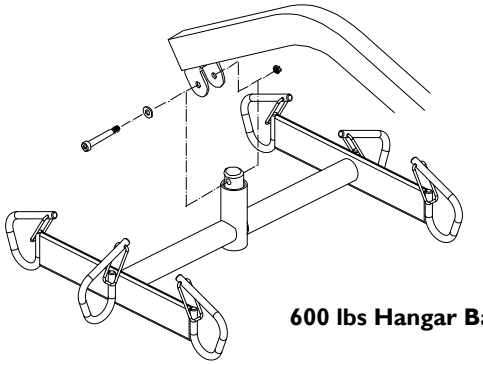
2. Remove existing hardware and replace the hangar bar.

CAUTION

DO NOT overtighten the nut and bolt. This damages the mounting bracket.



450 lbs Hangar Bar

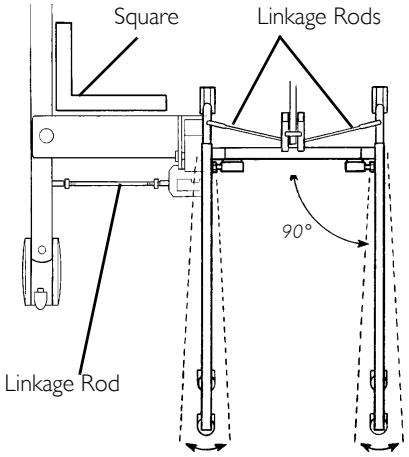


600 lbs Hangar Bar

10.8 Maintaining the Base Adjustment

The base adjustment should not require any attention other than:

1. Check that the legs are square when in the closed position.
2. Place a square on the inside of the legs and base to determine the 90° alignment.
3. Adjust the linkage rods until 90° alignment is achieved.



10.9 Replacing Casters/Forks

WARNING

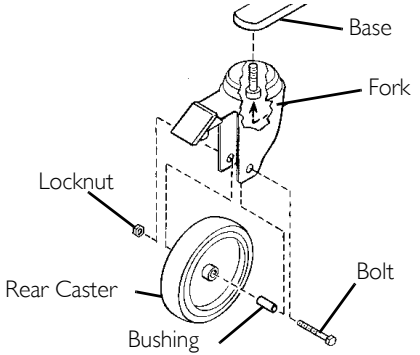
Ensure that there is sufficient room to turn patient lift on its side and that floor area is clear of debris. Otherwise, injury to personnel or damage to patient lift may occur.

Replacing Rear Casters

1. Place the lift on its side.
2. Remove the bolt and locknut that secure the existing rear caster to the fork.

   The bushing will be loose and may fall out of the caster. Existing bushing will be reused. Examine and replace if worn.

3. Install the new/existing bushing into the new rear caster.
4. Line up the mounting holes in the new rear caster and the fork.
5. Install the bolt through the fork and new rear caster and tighten securely with the locknut.



Replacing Front Casters

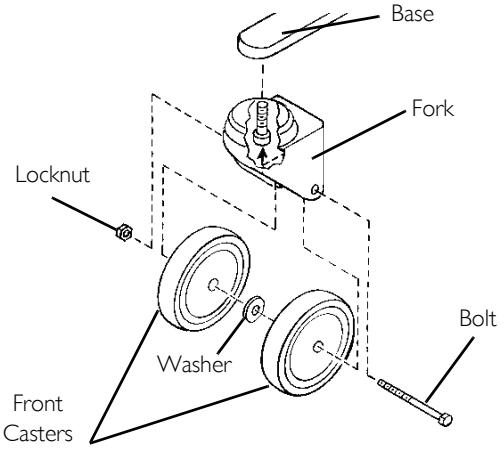
1. Place the lift on its side.
2. Remove the bolt and locknut that secure the existing front caster assembly to the fork.

   The front caster assembly consists of two casters and a washer in between.

   The washer will fall out from between the two casters.

   Washer will be reused. Examine and replace if worn.

3. Position the new/existing washer between the two new casters.
4. Line up the mounting holes in the new front caster assembly and the fork.
5. Install the bolt through the fork and the new front caster assembly and tighten securely with the locknut.



Replacing Forks

1. Place the lift on its side.
2. Remove the front or rear caster from the lift. Refer to Replacing Casters/Forks on page 40.
3. Unscrew the existing fork from the base.
4. Install the new fork onto the base.
5. Install the front or rear caster onto the lift. Refer to Replacing Casters/Forks on page 40.

11 Accessories

11.1 Reliant Scale RLS6

The Reliant Scale is a compact precision scale system designed specifically for the Invacare Patient Lift System.

WARNING

DO NOT install or use this equipment without first reading and understanding these instructions. If you are unable to understand the Warnings, Cautions or Instructions, contact a healthcare professional, dealer or technical personnel before attempting to install this equipment - otherwise, injury or damage may occur.

Removing the Hangar Bar

For this procedure, refer to FIGURE 11.1.

1. Remove the shoulder bolt, locknut, pinch guard and washer which secure the Hangar Bar to the boom mounting bracket.

Save the shoulder bolt and locknut to secure the Reliant Scale to the boom. The pinch guard will not be used when the scale is installed. Save the pinch guard for future use of the hangar bar without scale.

Removing the hangar bar hardware will release the hangar bar, two nylon washers and the hangar bar pin. Save the hangar bar pin and the two nylon washers for future use of the hangar bar without the scale.

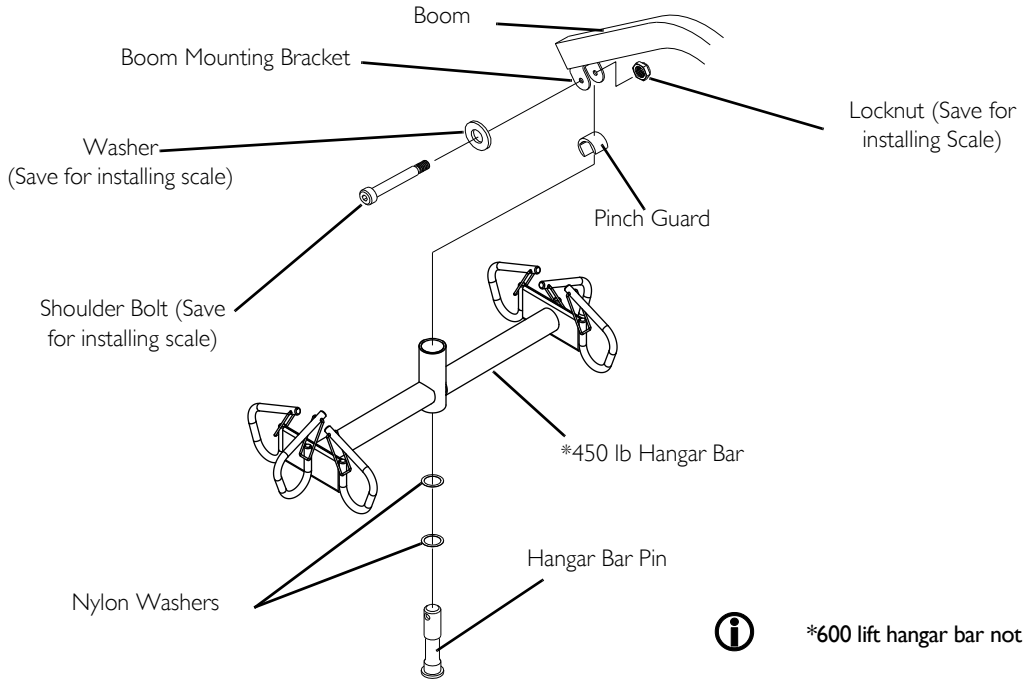


FIGURE 11.1 Removing the Hangar Bar

Installing the Reliant Scale

For this procedure, refer to FIGURE 11.2.

WARNING

Patient and sling MUST be removed from the lift during ALL installation procedures.

1. Position the load cell assembly of the Reliant Scale into the boom mounting bracket. Refer to Detail "A" in FIGURE 11.2.

Use 1/4-inch nylon washer.

2. Secure the Reliant Scale to the boom mounting bracket with a shoulder bolt, two nylon washers and a locknut. Securely tighten. Refer to Detail "A" in FIGURE 11.2 for washer orientation.

Ensure the shaft of the shoulder bolt passes through both sides of the boom mounting bracket.

3. Insert hangar bar pin with two nylon washers through the hangar bar. Refer to Detail "B" in FIGURE 11.2.
4. Align the mounting holes in the hangar bar pin with the mounting holes in the load cell assembly. Refer to Detail "B" in FIGURE 11.2.
5. Secure hangar bar pin to the load cell assembly with the provided mounting screw and locknut. Securely tighten. Refer to Detail "B" in FIGURE 11.2.

WARNING

After ANY adjustments, repair or service and BEFORE use, make sure all attaching hardware is tightened securely - otherwise injury or damage may occur.

6. Weigh the patient. Refer to Operating the Scale on page 46 and Weighing the Patient on page 47.

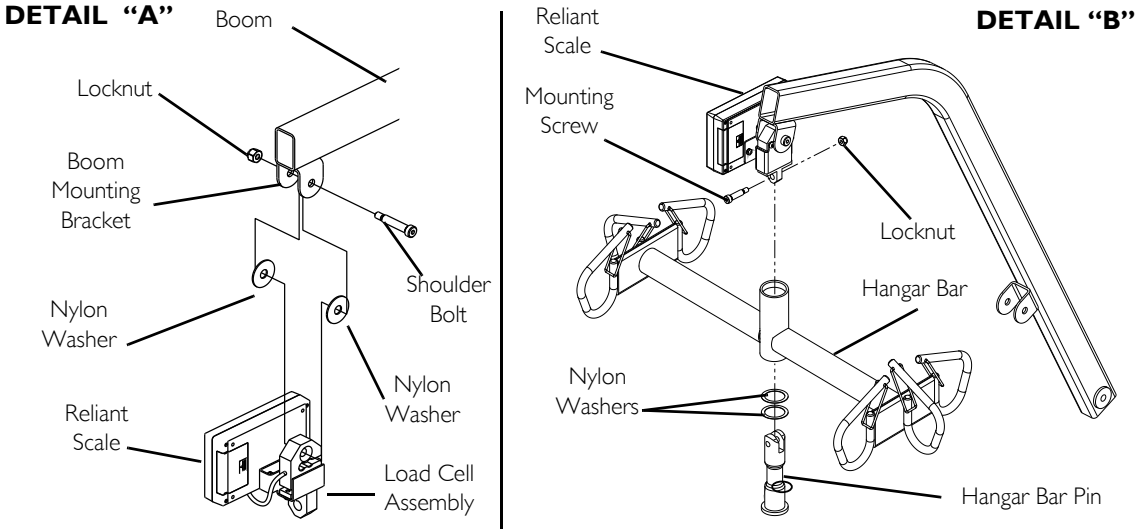
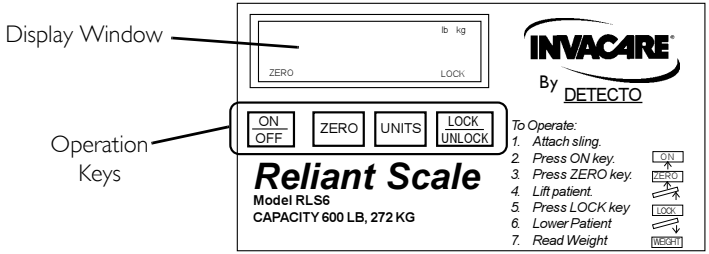


FIGURE 11.2 Installing the Reliant Scale

11.2 Operating the Scale

Keypad Functions

KEY	INDICATOR DISPLAYED	INDICATOR LOCATION	DEFINITION
ON OFF	OFF	Center of Display Window	Pressing this key will apply power to the scale and turn the unit on. When the scale is already on, pressing the button will turn the unit off.
ZERO	ZERO	Lower Left Corner of the Display Window	Pressing this key when the scale is on will reset the weight shown in the display window to zero.
UNITS	lb or kg	Upper Right Corner of the Display Window	The function of this key is to change the unit of measurement from pounds (lb) to kilograms (kg).
LOCK UNLOCK	LOCK	Lower Right Corner of the Display Window	This key is used to lock or unlock a weight value in the display window. NOTE: Weight displayed is a STORED weight and not the current weight when the key is used in the lock position.
N/A	LO BAT	Center of Display Window	Indicator is shown in the display window to notify when battery is low.



11.3 Weighing the Patient

WARNING

The weight capacity is limited to the lowest rated capacity of any one of the components in use (e.g. Patient Lift, Sling or Scale). The patient's weight MUST not exceed the lowest rated capacity of any component.

DO NOT operate key strokes with pointed objects (e.g. pencils, pens, fingernails, etc.) Otherwise damage to the key pad will result.

1. Attach sling straps to the hangar bar. For proper attachment instructions refer to Attaching a Sling on page 25.

   For improved accuracy on the 450 and 600 Reliant lifts, attach all sling straps to the center hooks on both sides of the hangar bar. However, patient comfort may require a different configuration of sling straps.

2. Press the ON/OFF key.

   The display will indicate the last weight that was measured. The word "LOCK" will be seen in the display box.

   The ZERO key is pressed in order to avoid capturing the weight of the sling and the hardware. If the ZERO key is not pressed the weight of the sling and the weight of the hardware will be included in the weight displayed. NOT ZERO-ING OUT WILL GIVE A FALSE READING OF THE USER'S TRUE WEIGHT.

3. Press the ZERO key. When the ZERO key is pushed the following will happen:
   A. The scale will reset to zero and the word "ZERO" will appear in the display.
   B. The lock function will then be turned off and the word "LOCK" will disappear from the display.

   The scale is now active and continually updating the weight display.

4. Place the patient in the sling. For patient placement instructions refer to Operation on page 20.
5. Activate the lift mechanism to raise the patient until they are completely supported by the lift. For patient lifting instructions, refer to Lifting the Patient on page 24.
6. Note the weight display.
7. When the weight display becomes stable press the LOCK button to lock the weight display. This will be indicated by the word "LOCK" appearing in the display window.

Should it be necessary to unlock the weight while the patient is still supported by the lift, the UNLOCK button may be pressed. The weight will unlock and the word "LOCK" will disappear from the display window. The weight value will then be updated. Once the weight becomes stable the weight can be locked again by pressing the LOCK button.

Stable being defined as the weight fluctuating two tenths of a pound. For example, a patient weighing one hundred pounds, the scale will fluctuate between 99.8 and 100.2 until the LOCK key is pressed. Fluctuation of the weight displayed is normal as noted above. Press the LOCK button to lock the weight.

The UNITS button can be pressed to toggle between units of pounds and kilograms. This is indicated by lb or kg appearing in the display window.

8. The lift may now be lowered and the sling removed from the patient.

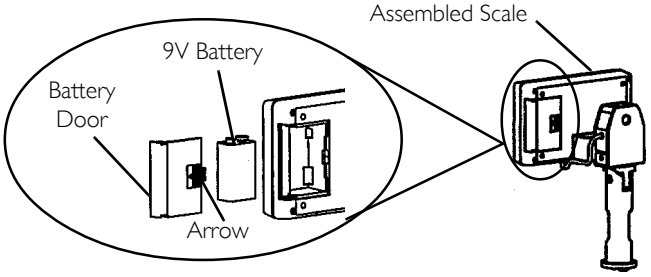
The patient's weight will continue to be seen in the display window. The display will turn off automatically after a two minute period of non-use [no changes in weight exceeding five pounds (two kilograms)]. You can NOT adjust the time delay for automatic shut off. After the display has turned off , the weight may be recalled by pressing the ON/OFF button. The unit can be turned off by pressing the ON/OFF button a second time.

11.4 Replacing the Battery

The scale is powered by a nine volt alkaline battery that should provide approximately 1500 readings before needing replacement.

When battery replacement is needed, LO BAT will appear on the display. Perform the following:

1. Slide the battery door open in the direction of the arrow.
2. Remove existing battery.
3. Install the new battery.
4. Reinstall the battery door.



Calibrating the Reliant Scale

The Reliant Scale will be pre-calibrated at the factory with the load cell. Should it be necessary to re-calibrate the scale, follow the instructions outlined below.

1. The patient and the sling must be removed from the scale to properly calibrate the Reliant Scale. For removing the patient instructions refer to Operation on page 20. For sling detachment instructions refer to Lifting the Patient on page 24.
2. With the Reliant Scale on, remove the four screws on the back of the enclosure and remove the front cover to expose the PC board.
3. Press the CAL button located on the PC board. The CAL switch is not labeled but is the only button on the PC board located in the lower right corner. Once the CAL button is pushed "CAL1" will be seen in the display window.

   CAL1 selects the calibration mode using 50 pounds of calibrated weight. CAL2 selects the calibration mode for use with 200 pounds of calibrated weight. Pressing the UNITS key toggles between CAL1 and CAL2.

4. When the desired calibration mode is displayed, press the LOCK/UNLOCK key.

   The display window will now show UnLd.

5. Ensure that there is no load on the scale and press the ZERO key.
6. The display window will show a dashed line (------) scrolling across and then the word LOAD will appear in the display window.
7. Perform one of the following:
   A. FOR CAL1 OPTION - support 50 pounds of calibrated weight from the scale and press the ZERO key.
   B. FOR CAL2 OPTION - support 200 pounds of calibrated weight from the scale and press the ZERO key.
8. The display window will show a dashed line (------) scrolling across and then the word DONE will appear in the display window.
9. Remove the weight from the scale and press the LOCK/UNLOCK key.

   The unit will now be in a temporary test mode and will not lock the weight display. This will allow weight to be loaded and unloaded to check the calibration.

10. Turn the unit off by pressing the ON/OFF key.
11. Turn the unit on by pressing the ON/OFF key.

    Scale will now be in normal operation.

11.5 Troubleshooting

SYMPTOM	PROBABLE CAUSE	SOLUTIONS
Unit does NOT work properly.	Battery failure.	Check battery. Replace if necessary.
Battery has been replaced and unit still does NOT work properly.		Contact Invacare for Service at 1-800-333-6900

Display Codes

CAL	CALIBRATION REQUIRED - Indicates improper stored calibration data, calibration is necessary.
OCAP	OVER CAPACITY - Indicates a weight exceeding the capacity has been loaded on the scale.

Notes

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